

## REMARKS

### CLAIM REJECTIONS

1. Claims 1 - 7 were objected to because of informalities, *i.e.*, the use of the words "designed to" in line 1 which were deemed indefinite by the examiner.

Claim 1 has been amended to eliminate the informalities. Claims 2 through 7 are dependent claims which depend from claim 1 and are also amended thereby.

2. Claims 1, 2, 4, and 6 - 9 were rejected under 35 U.S.C. §102(b) as being anticipated by US Patent No. 3,551,922, hereinafter "Watson".

Watson discloses a hinge post assembly for attaching a toilet seat to the rearward platform 18 of a toilet bowl having a hole 40 therethrough. There is a threaded fastener 32, actually a bolt, with a head 30 and threaded shank 28. "Cooperating with the fastener 32 is an expansible nut 34 consisting of a tubular internally-threaded insert 36 seated in an approximately cylindrical casing 38 of elastic deformable material, such as synthetic rubber." (col. 1, lines 69 - 71, col. 2 lines 1 - 2)

"[T]he expansible nut 34 is of sufficiently small diameter to be capable of being pushed through the hole 40 from above. The fastener 32 and expansible nut 34 together constitute a top-insertable fastener unit, generally designated 42." (col. 2, lines 4 - 8)

"When the fastener 32 is tightened from above by means of a screw driver inserted into the slotted head 30 the lower end of the casing 38 bulges outward so as to prevent upward movement thereof through the hole 40." (col. 2, lines 14 - 18)

There is no thread means disposed within the opening to cooperate with the bolt 32 to retain the bolt 32 in the opening, the hole 40. The expansible nut 34 can be pushed through the hole 40. It is only when the bolt 32 is screwed into the insert 36 causing the lower end of the casing 38 to bulge outward that the totality of the bolt 32, insert 36 and casing 38 (the nut 34) are prevented from upward movement through the hole 40. The threaded insert 36 is actually disposed below the hole 40 in the rearward platform 18 so the threading is not within the hole 40 at all. See FIG. 2 of Watson. "The expansible nut is of sufficiently small diameter to be capable of being pushed through the hole 40 from above." (col. 2, lines 4 - 6) Therefore, as noted above, it is only when the insert 36 and casing 38 are caused to bulge outward that the unit is retained within the hole 40.

In the instant invention there is threading within the walls of the opening 45 in the rear flange 21 of the toilet bowl. The threading may be formed into the material of the flange or by affixing tubes with threaded interiors into the openings. (specification page 14, lines 5 - 9; page 15, lines 3 - 7) There is no additional nut located below the opening to hold the threaded rod 61 in place. The threading of the rod 61 cooperates directly with the threading of the opening 45. See FIGS 10 and 11.

The invention of Watson uses a bolt that requires a screw driver. The bolt passes easily through the hole in the rearward platform of the toilet seat. The space between the bolt and the walls of the hole is filled with the casing of elastic deformable material, i.e. rubber. The bolt of Watson passes through the rubber casing 38 that has a small threaded insert 36 near the bottom. When the bolt 32 is screwed into the insert 36 the casing 38 deforms and expands below the platform 18 to prevent the combination bolt 32 and casing 38 from being removed from the hole 40.

The instant invention uses a threaded rod "dimensioned to be received within the vertical opening". The threaded rod of the instant invention is screwed directly into the opening in the flange of the bowl. Threading in the walls of the opening cooperates with the threading of the rod. The threading in the

walls is over the full length of the opening in the flange. The rod is retained within the opening itself. There is no space between the rod and the walls of the opening. No other nuts or casings are needed.

Watson discloses a hinge post 10 consisting "of the hinge post itself 12 and a cover plate or fastener concealing plate 14." (col. 1, lines 53 - 55) The hinge post 12 has a hinge post body 15 and an upwardly and forwardly inclined arm 20, and a base 16 that is vertical and rests on the rearward platform 18. (FIG. 2, col. 1, lines 55 - 60) A further review of the description indicates that the hinge post 10 is the "bracket" which is the essence of the invention of Watson. The essence of the instant invention is the threaded rod that cooperates with the threaded opening in the flange and not the bracket.

The invention of Watson is a "fastener-concealing toilet seat hinge post, generally designated 10 as consisting generally of the hinge post 12 itself and a cover plate or fastener-concealing plate 14." (col. 1, lines 52 - 55) The hinge post structure is the bracket that attaches the toilet seat to the rearward platform 18 of the toilet bowl. There are two hinge posts, each "consists of a hinge post body 15 including a base 16 adapted to engage and rest upon the rearward platform ... and upwardly and forwardly inclined arm 20..." (col. 1, lines 55 - 60) The base member 16 of Watson does not have a top surface and a bottom surface. The base member 16 of Watson has vertical walls supporting the slanted arm 20 which is the "top surface" of the hinge post. There is "a bore 26" in the hinge post 12 "with a counterbore 27 above it for the reception of the threaded shank 28 and head 30 of a threaded fastener 32..." (col. 1, lines 67 - 69) this bore 26 is not therethrough. It is an opening in a portion of the base 16, but does not extend through the hinge post. There is space above the bolt which is covered from the outside of the hinge post by the deformable concealing plate 14. There is no cap.

The hinge post is designed to cover and contain the threaded fastener 32, a bolt. There is no cap. The totality of the hinge post 10 structure covers the bolt 32. There is a removable cover plate or fastener-concealing plate 14 which is located in the front surface of the upwardly and forwardly inclined arm 20 of

the hinge post assembly. The fastener-concealing plate 14 covers the head of the bolt. The "cover plate 14 is bent as shown in FIG. 2, to fit snugly into a correspondingly-shaped additional recess in the undercut bottom surface or portion 60 of the base 16. The cover plate 14 is preferably formed of polypropylene plastic which is easily bent and can be flexed indefinitely without cracking or breaking." (col. 2, lines 34 - 38) These structures are quite different from the simple bracket and cap of the instant invention. There is no deformable structure in the instant invention. The bolt of Watson does not project above the top surface of the hinge post. It lies within the hinge post.

In the installation of the Watson device, "The hinge post 14 is placed on the toilet bowl platform with its fastener bore aligned with the hole 40. The expansible nut 34 is removed from the fastener 32 before the shank 28 is inserted through the aligned holes... The expansible nut 34 is then rethreaded onto the shank 28 against the bottom of the tongue... and this assembly is mounted on the rearward toilet bowl platform while the operator forces the casing 38 of the expansible nut 34 into the hole 40... the operator then tightens the threaded fastener 32 by means of a screwdriver. Whereupon the resilient casing 38 of nut 34 is caused to bulge outward ... against the side walls of the platform hole 40" (col. 2, lines 48 - 64) In Watson, the toilet seat cannot "be removed by removing the cap and lifting it from the above the flange" as the examiner suggests. In Watson the concealing plate must be removed by flexing the deformable plastic plate and removing it. A screw driver is then used to remove the bolt 32, then the bracket is lifted with the toilet seat from the rear platform.

In the installation of the assembly of the instant invention, the hole in the bracket can be aligned with the opening in the flange and the threaded rod inserted through both openings and retained by cooperation between the threads on the rod and the threads in the wall of the opening in the flange. The installation can just as easily be accomplished by placing the threaded rod 61 into the threaded opening 45 in the flange 21 first and then putting the toilet seat into place by setting the bracket 47 over the rod 61 so the top of the rod 61 extends through the opening 60 in the bracket 47. A wing nut 62 may

be then threaded onto the extending top of the rod 61 to retain the toilet seat. (Specification page 15, lines 20 - 25) In Watson this is impossible because there is a headed bolt 32 which must be set in place after the seat brackets are positioned and must be removed before removing the seat. Clearly the instant invention is different and is used differently than that of Watson.

With regard to claim 2, the part 34 of Watson "is an expansible nut 34 consisting of a tubular insert 36 seated in an approximately cylindrical casing 38 of elastic deformable material, such as synthetic rubber." (col. 1, lines 71 -72; col. 2, lines 1 - 2) There is no threading about the walls of the opening in the rearward platform of the toilet bowl. The tubular insert 36 which does have threading is not disposed within the hole 40 in the rearward platform. A review of FIG. 2 clearly shows that the tubular insert 36 with the threading is located below the rearward platform of the toilet bowl. It is necessary that the expansible nut be located below the platform because when cooperating with the threaded bolt 32 it is caused to expand so the casing 38 cannot be withdrawn through the hole 40 when the bolt 32 is in place.

In the instant invention, there is threading in the walls of the opening in the flange of the toilet bowl. This threading cooperates with the threaded rod so the rod can be screwed directly into the opening 45 in the flange. (specification, page 14, lines 4 - 7; FIG. 7)

With regard to claim 4 , claim 4 has been canceled.

With regard to claim 6, Watson describes a counterbore 27 which is actually a space or the recess beneath the concealing plate 14 of the hinge post 12. "The hinge post 12 has a bore 26 with a counterbore 27 above it for the reception of the threaded shank 28 and head 30 ..." (col. 1, lines 67 -69) The counterbore 27 of Watson provides a space over the head 30 of the bolt 32. There is no indentation on the base to receive the head 30 of the bolt 32.

The instant invention describes two structures, first, a recess 49 in the underside of the cap 48, designed to cover the wing nut 62 used to prevent the bracket (and the toilet seat) from moving or being lifted when in use. The second structure is a countersink 52 in the top surface of the bracket 47 which has no counterpart in Watson. The countersink 52 receives the bottom portion of the wing nut 62 so that it does not extend too far above the surface of the bracket 47. Thus the recess 49 in the cap 48 covers the top of the wing nut 62 and the countersink 52 receives the bottom of the wing nut 62 of the instant invention. The counterbore 27 of Watson only covers the head of the bolt 30. Watson does not teach a countersink in the manner of the instant invention.

With regard to claim 7, claim 7 has been canceled.

With regard to claim 8, Watson does not describe "a threaded rod having a top end and a bottom end, being substantially longer than the thickness of the flange and being dimensioned to pass through the aperture in the bracket and to cooperate with the thread means in the opening in the flange".

Watson teaches a bolt 32 with a head 30, not a threaded rod. The bolt 32 cooperates with "an expansible nut 34 consisting of a tubular internally threaded insert 36 seated in an approximately cylindrical casing 38 of elastic deformable material, such as synthetic rubber." (col. 1, lines 70 - 72; col. 2, lines 1 - 2)

Claim 8 also notes the step of "rotating the rod so that the threading of the rod cooperates with the thread means in the flange" Watson does not teach thread means in the flange. Watson uses a rubber casing with a threaded nut embedded in the bottom portion of the rubber casing. The threaded nut is located within the casing and below the level of the rearward platform of the toilet bowl, not within the hole 40.

Claim 8 also notes the step of lifting the toilet seat assembly away from the toilet bowl flange while the threaded rod remains in place. In Watson, this cannot be accomplished without the step of removing the bolt 32. In the instant invention the seat can be removed without removing the threaded rod. This step is one of the unique features of the instant invention and this is not anticipated by Watson. Therefore the complete method described in claim 8 cannot be practiced by the Watson invention.

With regard to claim 9, claim 9 refers to a concealing cap to cover the projecting end of the rod. There is no concealing cap in Watson and there is no rod with a projecting end in Watson. There is no way the toilet seat can be removed after removing just a cap in Watson. Watson has no cap and the bolt must be removed in order to remove the hinge post and toilet seat. Therefore, claim 9 has no relationship or counterpart in Watson.

Claims 1, 2, 6, 8 and 9 are not anticipated by Watson and are not unpatentable with regard to Watson.

3. Claim 3, was rejected under 35 U.S.C. §103(a) as being unpatentable over Watson in view of Alba (Pat. No. 6,637,040) and further in view of Umehara (Pat. No. 4,489,447).

Please note: With regard to Alba, a declaration under Rule 131 is being submitted herewith. In the alternative, this patent is also discussed below.

Watson has been discussed in detail above. The expandable nut 34 of Watson is located below the flange or rear platform 18 of the toilet bowl and is embedded in a cylindrical casing 38 that is made of rubber and forced into the hole 40. In order to remove the toilet seat fastened with the Watson invention, the bolt must be removed. With the instant invention, the toilet seat is removed by merely lifting the bracket and toilet seat off the threaded rod. The threaded

rod is not removed. If a wing nut is used, the wing nut is first removed and then the seat and bracket are lifted off the threaded rod. That the threaded rod is not removed once it is seated is the purpose and essence of the instant invention.

The Alba system uses a mounting bolt 46 that has "a threaded distal end 48 ...and a hollow cavity 50 and an intake and an exit port (52 and 54). (col. 4, lines 55 - 60) The toilet bowl of Alba has bolt holes 64 with a corresponding threaded nut 66 imbedded within the toilet bowl near the distal end of each respective bolt hole 64. It can easily be seen from FIG. 3 of Alba that the mounting bolt 46 must be removed in order to remove the seat assembly. Also there is a nut to threadingly hold the bolt in place. The instant invention does not use a bolt, it uses a threaded rod so the seat assembly can be removed without removing the rod. The instant invention does not use a nut, it incorporates threading within the wall of the opening in the flange, over the entire length of the opening in the flange. See specification page 14, lines 4 - 9, and page 15, lines 1 - 7. There is no nut of any kind used to secure the threaded rod into the opening in the flange. The threaded rod is screwed into the threading that is a part of the material of the flange or that is adhered to the full length of the flange opening by means of a thin tubular insert 53 that is not a nut and bears no resemblance to a nut. See specification page 15, lines 1 - 8. The tubular insert 53 is not embedded into the flange, it is affixed to the inside of the full length of the opening 22 and it is utilized because of difficulties that may arise in forming threading within the opening when the toilet bowl is made of a ceramic porcelain material. The use of such an insert makes the use of finer threads possible.

There is no tubular insert in Alba. Part 66 is the threaded nut. There is no mention of the nut having a substantially smooth exterior wall and a threaded interior wall. The "insert" is a nut, not a tube that fits closely against the entire wall of the opening. The threaded nut 66 is actually embedded into the material of the toilet bowl to a substantial extent as clearly seen in FIG. 3, and is located only in the distal end of the opening, not over its full length.



With regard to Umehara, this patent describes a unit that is horizontally mounted on the flange to prevent the lid from slamming down. The structures mentioned in col. 4, lines 13 – 22 refer to the parts of the horizontally mounted unit that retards the descent of the seat so it does not fall quickly or slam down. A review of FIG. 4 of Umehara clearly shows that bushing 20 is seated in the opening 10, both being horizontal and not part of the attachment of the bracket to the toilet bowl. The bolts that fasten the brackets to the toilet bowl are seen in FIG. 4 extending downward from stationary member 2 found at each end of the seat unit. It is that horizontally oriented bushing 20 that may be bonded within the hole 10 in the horizontal portion of the bracket with an adhesive. Both parts to be bonded are metal and bear no resemblance to any parts of the instant invention, neither is structure or material of composition. These structures do not exist in the instant invention and so cannot be compared to the threaded rod and threaded flange opening of the instant invention.

There is no mention in Umehara of the actual attachment of the bracket to the toilet bowl. Only the downward extending pins are shown and there is no discussion of how those pins are secured to the toilet bowl. The pins do not even have parts number designations because they are not pertinent to the invention of Umehara which is only to prevent the seat from dropping.

Since the structures of Watson and Alba bear no resemblance to the threaded bolt and threaded tubular insert maintained by an adhesive in the opening and enabling the seat to be removed without removing the threaded rod, the instant invention (claim 3) is not obvious over Watson in view of Alba.

Since the structure of Umehara describes metal parts designed to prevent the toilet seat from falling and not pertaining to the fastening of the toilet seat assembly to the toilet bowl, the instant invention (claim 3) is not obvious over Watson in view of Alba and Umehara.

Claim 3 is not obvious over Watson in view of Alba and further in view of Umehara and is not unpatentable over Watson in view of Alba and further in view of Umehara.

4. Claims 5 and 10, were rejected under 35 U.S.C. §103(a) as being unpatentable over Watson.

It would not have been obvious to one having ordinary skill in the art to substitute the threaded bolt of Watson with a threaded rod and wing nut because the invention of Watson requires the removal of the threaded bolt in order to remove the seat assembly. Watson does not discuss any other way to accomplish this. The use of the threaded rod of the instant invention was chosen because it enables the seat assembly to be removed by merely removing the wing nut. With the instant invention, once the threaded rod is screwed into the threaded opening in the toilet bowl flange it does not have to be removed in order to remove the seat assembly. That is the uniqueness of the instant invention. No screw driver or other tool is needed to remove the seat assembly because the treaded rod is not removed.

With the Watson invention the bolt must be removed with a screw driver before the seat assembly can be removed. If the use of the threaded rod and wing nut is so obvious, why doesn't Watson discuss a means to remove the seat without removing the bolt first? Why doesn't Watson suggest the threaded rod as an alternative to the bolt? Why hasn't any other patent disclosed this means and method to remove the seat assembly without first removing the bolt? The use of the treaded rod and wing nut is not obvious. The wing nut is used to keep the seat assembly from moving or becoming dislodged, and to provide a simple way to keep the seat assembly in place yet it is easily removed without a tool when necessary. Merely substituting the threaded rod and wing nut for the bolt of Watson without an indication that the seat assembly can be removed without removing the bolt is clearly not an obvious extension of Watson.

Claims 5 and 10 are not obvious over Watson and are not unpatentable over Watson.

The instant invention is not unpatentable over any one or a combination of the cited patents.

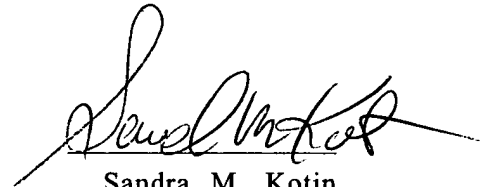
Notice is taken of the prior art of record and not relied upon.

No new matter has been added.

No additional fee is due.

In view of the above amendment and remarks the Examiner's consideration is greatly appreciated for allowance of amended claim 1 and claims 2,3,5,6,8,9 and 10.

Respectfully submitted,



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